

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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1. The Air Force Research Institute (VLU) at Letnany has never attained great scientific levels. During World War II the Germans permitted the institute to continue its research, but they refused to furnish modern equipment, secret devices or new improvements used by the German army. Now the USSR, distrusting any research work done outside its territory, appears to have adopted a similar attitude towards the institute. The meager success realized by Czechoslovakia in the field of jet aircraft results from a shortage of metals and an inadequate knowledge of the metals used in the production of jet planes.
2. Nevertheless, the VLU and the VTLU (Air Force Technical Institute) have carried out experiments with new weapons and instruments. As early as 1948 the Podmokly branch of the VTLU tested a radio-controlled bomb at the Malacky airfield. This bomb has two supporting wings on the body and a rudder at the back. A radio device inside the bomb transfers the impulses of the directing aircraft to the steering wings. When the bomb is not filled with explosives, it weighs about 80 kg. A plane carrying the bomb travels about 240 km per hour, but at the time the bomb is released, the plane's speed is cut down to 160 km per hour in order to permit direction of the bomb to the target.
3. The Podmokly branch of the VTLU has also constructed a rocket, according to German plans, for starting and landing planes. The rocket, in the form of a bomb which is attached to the plane by belts, has a smooth surface and a rather blunt nose, and ends in a cone-shaped exhaust pipe. The bomb is filled with rapid-combustion gunpowder (sic), which is ignited by means of an electric ignition system. This type of bomb can be used by jet fighters of the types Me-109, Me-262, and S-90, 91 and 92.
4. During the take-off of a plane, the cone-shaped opening of the rocket is pointed backward. The rocket charge is released while the plane is still travelling on the ground at 80-90 km per hour. The plane can therefore take off from a space of 200-250 m. Thus the length of the runway required for an Me-109 with rocket assist is only 300-400 m. When the plane lands, the conical opening faces forward, and the rocket is fired as the plane reaches a speed of 100 km per hour.

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The effect is instantaneous and the plane is brought to a stop within about 100 m after the rocket is released, thereby shortening the landing space by about 200 m. The pilot experiences considerable shock and black-outs as a result of the sudden starting and stopping, and experiments are now under way to eliminate these effects.

5. Also being tested is new aircraft television which, like radar, is to be used in fog, darkness or clouds. In November 1948, six test flights using television were made, and the results were satisfactory. Tests are reportedly being continued. Attempts to improve German radar are not proceeding at a rapid pace because of a shortage of experts. The principal achievement has been the elimination of vibration by the shortening of the German aeriels.

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